

# PACIFIC

**STEEL  
HEATING  
BOILERS**



CATAROS No. 2

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CATALOGUE NUMBER FIVE

1920

# GENERAL BOILERS CO.

*Manufacturers of*

PACIFIC PATENTED HEATING BOILERS

STRAIGHT-DRAFT and DOWN-DRAFT

STEAM and HOT WATER

TANK HEATERS

CIRCULATING TANKS

PNEUMATIC AND STORAGE TANKS

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*General Offices and Plant, Waukegan, Ill., U. S. A.*

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## INTRODUCTION

**I**N PRESENTING THIS CATALOGUE to the public we wish to call your particular attention to the fact that neither time nor money have been spared in designing and constructing the PACIFIC Firebox Steel Boilers. The inventor, having the advantage of many years of experience in designing and installing all the different known heating systems, has embodied every scientific and practical feature in the design of the PACIFIC boiler to make it efficient and practical. This boiler has the unanimous approval of the best heating engineers and architects in the country. The many satisfied users of the PACIFIC Boilers have proven every claim we make for them.

It is not our intention to go into detail regarding the best methods or systems used in heating buildings, either by steam, vapor, or hot water, but we merely wish to call your attention to the fact that the amount of *unused heat wasted up the chimney by an improperly constructed boiler cannot be regained by any expensive system of piping*. In designing an economical and efficient system it, therefore, becomes necessary to give particular attention to the selection of the proper boiler, as the boiler is the medium by which the energy of the fuel is transformed into heat. The balance of the heating system, such as piping, radiation, etc., are only to transmit the heat from the boiler to the different parts of the building to be heated. **IT, THEREFORE, IS EVIDENT THAT THE BOILER IS THE MOST IMPORTANT PART OF THE HEATING SYSTEM.**

# PACIFIC DOUBLE RETURN TUBULAR STEAM AND HOT WATER HEATING BOILERS



Patents granted and pending

**T**HE PACIFIC STEEL BOILER has been designed as a heating boiler exclusively. On account of its compactness it may readily be installed in the usual small space available for boiler room in the average building.

The smoke outlet is located in the rear and below the top of the boiler. This permits of using a short smoke pipe and no additional head room is required when the boiler is set with the rear toward the chimney as is the usual practice with various other types of heating boilers.

## EFFICIENCY

To determine the economical efficiency of any boiler there are several very important features to be taken into consideration, such as proper draft area, combustion, heating surface and heat travel; the object being first to obtain perfect combustion and to burn all the gases in the fuel, second to give the gases *a long travel over the heating surface of the boiler so that all the available heat may be transmitted to the contents of the boiler, thereby producing the maximum boiler efficiency.*

One of the many features of the PACIFIC boiler is the offset in the rear head, which forms a deflector or baffle plate. The hot gases leaving the firebox pass over the shell rearward until they strike the offset in the rear head; they are then deflected forward through the lower set of tubes to the front smoke box and rearward again through the upper set of tubes; **THIS INSURES THE LONGEST POSSIBLE HEAT TRAVEL AND AVOIDS THE ESCAPE OF HEAT AND HOT GASES TO THE CHIMNEY.**



**W**E CLAIM for the PACIFIC boiler that we are able to effect a saving of one-third of the fuel, as compared with the average boiler. In several instances where we have replaced other boilers, the fuel bill has been cut in two and the entire plant heated up in about one-half of the time previously required.

We wish to direct your attention to a careful study of the illustrations and sectional views on the following pages of the catalogue, which clearly show that these boilers are simple to operate and easy to keep clean. With ordinary care PACIFIC boilers should last longer than any other type, as there are no arches or supports in the rear to burn out, all wearing parts of the boiler are submerged in water and consequently cannot burn out.

#### FUEL

These boilers are especially designed for burning soft coal, wood or crude oil, but will burn any other fuel equally well.

#### TESTING AND INSPECTION

All boilers are thoroughly inspected and tested with 100 lbs. hydrostatic pressure and made tight before shipment is made.





## PACIFIC DOUBLE RETURN FIREBOX BOILERS

Portable Type with Detachable Shell



### SHELL

The Shell Heads and Firebox of all PACIFIC Boilers are constructed of the best steel plate, fifty-five to sixty thousand pounds tensile strength.

For special requirements we can furnish PACIFIC Boilers made of "ARMCO" rust-resisting iron. All seams on Shell and Firebox are electric welded by the most modern and up-to-date welding methods and equipment.

The Shell and Firebox, therefore, are practically one continuous sheet of steel, and the seams are not affected by contraction or expansion.

Many hundreds of PACIFIC Boilers have been installed without a single instance of a defective electric welded seam.

(Note: We have tested 20"x5' quarter-inch shell, electric welded tanks, 550 lbs. pressure without fracture. Two 160 H. P. water tube electric welded boilers, built by us, have been in constant service for three years under 125 lbs. working pressure.)

### FIREBOX

The Fireboxes are of patented design and constructed to withstand a cold water hydrostatic test of 100 lbs. per square inch.

(Note: We have tested this type of construction to 435 lbs. cold water pressure without fracture.)

There are no mud rings in the Firebox.

The lower edges are flanged and welded.

All door openings are also flanged and welded.

### TUBES

All Tubes are steel of standard manufacture and of the very best quality.

The Tubes are properly expanded in the heads and carefully beaded.



## PACIFIC FIREBOX HOT WATER BOILERS

Catalog Number		141	142	143	144	145	146	147	148	149	150	151	152
*Net Rating, Water	sq. ft.	550	700	800	1100	1350	1600	1750	1900	2100	2800	3500	3500
Code Word		Wade	Wadi	Wad	Wag	Waif	Wall	Wan	War	Wash	Wasp	Wax	Web
List Price, with Firing Tools	\$	442	494	560	780	864	936	1010	1086	1120	1280	1440	1440
Shipping Weight, Approximate	lbs.	1300	1450	1600	2000	2200	2400	2600	2800	3500	4000	4500	4400
Asbestos to Cover 1¼ ins.	lbs.	100	125	150	200	225	250	275	300	325	350	375	375

\*Direct Hot Water Radiation: Make allowance for exposed piping and storage tank  
FOR SPECIFICATIONS SEE PAGE 12

**PACIFIC FIREBOX BOILERS ARE THE BEST DESIGNED AND MOST  
ECONOMICAL HEATING BOILERS MADE**





## PACIFIC FIREBOX HOT WATER BOILERS

Catalog Number		153	154	155	156	157	158	159	160	161	162	163	164	165
*Net Rating, Water	sq. ft.	4100	4800	5800	6500	7400	8300	9500	11000	13500	16000	19000	21500	25500
Code Word		Wed	Weed	Weft	Weld	Well	Wen	Wend	Welsh	Welt	Wept	West	Wet	Weve
List Price, with Firing Tools \$		1620	1806	1874	2026	2234	2392	3084	3526	4060	4864	5246	5678	6100
Shipping Weight, Approx. lbs.		5000	5600	6300	6600	7200	7800	8600	10600	11800	12000	13500	18000	20000
Asbestos to Cover	lbs.	400	425	450	550	600	650	700	800	850	900	1000	1100	1200

\*Direct Hot Water Radiation: Make allowance for exposed piping and storage tank  
FOR SPECIFICATIONS SEE PAGE 13

**PACIFIC FIREBOX BOILERS ARE THE BEST DESIGNED AND MOST  
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## PACIFIC FIREBOX HOT WATER BOILERS SPECIFICATIONS

Catalog Number		141	142	143	144	145	146	147	148	149	150	151	152
Diameter Shell	ins.	22	22	22	28	28	28	28	28	33	33	33	37
Width Boiler	ins.	30	30	30	36	36	36	36	36	41	41	41	45
Length Boiler	ins.	42	48	54	48	54	60	66	72	54	66	78	80
Height Boiler	ins.	58	58	58	67	67	67	67	67	73	73	73	77
Hgt. to Cntr. Smoke Conn.	ins.	52	52	52	58	58	58	58	58	62	62	62	65
Diameter Smoke Conn.	ins.	10	10	10	12	12	12	12	12	14	14	14	16
Size Chimney Required	ins.	8x12	8x12	8x12	12x12	12x12	12x12	12x12	12x12	16x16	16x16	16x16	16x16
Minimum Hgt. Chimney	ft.	30	30	30	40	40	40	40	40	40	40	40	45
Grate Area	sq. ft.	2.2	2.5	2.9	3.6	4.1	4.6	5.0	5.5	5.5	6.6	7.8	9.1
Heating Surface	sq. ft.	45.9	57.0	68.0	86.3	103.2	120.0	136.9	153.7	147.0	196.0	245.0	234.7
Size Outlet	ins.	3	3	3	4	4	4	4	4	2-4	2-4	2-4	2-4
Size Return	ins.	3	3	3	4	4	4	4	4	2-4	2-4	2-4	2-4
Diameter Tubes	ins.	3	3	3	3	3	3	3	3	3	3	3	3
Number of Tubes		18	18	18	30	30	30	30	30	48	48	48	42
Length Upper Tubes	ins.	24	30	36	30	36	42	48	54	36	48	60	60
Length Lower Tubes	ins.	12	18	24	18	24	30	36	42	24	36	48	48



PACIFIC FIREBOX HOT WATER BOILERS  
SPECIFICATIONS

Catalog Number		153	154	155	156	157	158	159	160	161	162	163	164	165
Diameter Shell	ins.	37	40	40	46	46	52	52	60	60	66	66	72	72
Width Boiler	ins.	45	48	48	54	54	60	60	68	68	74	74	80	80
Length Boiler	ins.	92	96	108	96	108	96	108	110	122	110	122	110	122
Height Boiler	ins.	77	80	80	89	89	96	96	108	103	114	114	122	122
Hgt. Ctr. Smoke Conn.	ins.	65	68	68	74	74	80	80	91	91	97	97	103	103
Diam. Smoke Connection	ins.	16	18	18	18	18	20	20	26	26	30	30	32	32
Size Chimney Required	ins.	16x16	20x20	20x20	20x20	20x20	24x24	24x24	30x30	30x30	30x30	30x30	36x36	36x36
Minimum Hgt. Chimney	ft.	45	50	50	50	50	50	50	60	60	70	70	70	70
Grate Area	sq. ft.	9.8	11.3	12.2	12.6	14.4	16.3	19.3	20.7	23.0	26.2	28.7	29.5	33.0
Heating Surface	sq. ft.	279.7	325.4	379.1	413.2	480.3	533.0	612.0	758.0	865.0	996.0	1137.0	1174.9	1343.3
Size Outlets	ins.	2-4	2-5	2-5	2-6	2-6	2-6	2-6	2-7	2-7	2-8	2-8	2-8	2-8
Size Returns	ins.	2-4	2-5	2-5	2-6	2-6	2-6	2-6	2-7	2-7	2-8	2-8	2-8	2-8
Diameter Tubes	ins.	3	3	3	3	3	3	3	3½	3½	3½	3½	3½	3½
Number Tubes		42	52	52	67	67	92	92	96	96	132	132	150	150
Length Upper Tubes	ins.	72	72	84	72	84	72	84	84	96	84	96	84	96
Length Lower Tubes	ins.	60	60	72	60	72	60	72	72	84	72	84	72	84





Pacific Double Return Firebox Steam Boiler  
PATENTED



## RATED CAPACITY

The rated capacity of PACIFIC Boilers is the number of square feet of direct radiation, or equivalent, for which they will provide when radiation installed is ample to heat building and boiler and piping is properly covered. Steam ratings are based on 2 lb. steam pressure and water ratings 180 degrees Fahrenheit at the boiler, using bituminous coal 11,000 to 12,000 B. T. U's per lb. It is unnecessary to install a boiler 50 per cent to 100 per cent larger than the *boiler load* as the ratings are conservative, and the boilers will carry up to their rated capacity without forcing.

## BOILER CAPACITY REQUIRED FOR STORAGE TANKS

The amount of boiler capacity required for any given size of storage tank is impossible to accurately determine, as the amount of hot water used is variable and usually an unknown quantity. Following are approximate requirements of various type buildings:

Apartment Building, 12 to 15 gallons for each apartment.

Hotels, 6 gallons for each room supplied with hot water.

Office Building, 4 to 5 gallons for each office supplied with hot water.

Each 100-gallon tank capacity is approximately equal in *boiler load* to 200 sq. ft. direct radiation, irrespective of whether tank is heated by steam coil or coil in Firebox.

## EQUIPMENT

All PACIFIC Boilers are regularly equipped with Rocking Grates, and furnished with firing tools, consisting of poker, slice bar, flue scraper and handle. All Boilers can be provided with coil openings when so ordered. Add \$6.00 to list price of boiler.

## STEAM TRIMMINGS

Trimming for PACIFIC Steam Boilers consist of the following:

Cast Iron Water Column; Water Gauge complete; Tri Cocks; 5" I. C. Steam Gauge and Syphon; A. S. M. E. Safety Valves as per specifications; Metal Bellows Damper Regulator with Chain and Pulleys.



## PACIFIC FIREBOX STEAM BOILERS

Catalog Number		244	245	246	247	248	249	250	251	252	253	254
*Net Rating, Steam	sq. ft.	650	750	850	950	1050	1100	1375	1700	2100	2500	3000
Code Word		Stab	Stag	Stage	Stand	Stair	Stake	Stale	Stalk	Stall	Stamp	Stanch
List Price, Low Pressure, with Firing Tools	\$	708	818	890	962	1036	1070	1170	1310	1440	1620	1806
List Price, Steam Trim'gs, complete \$ See page 15.		46	46	46	48	50	50	50	50	52	52	60
Shipping Weight, approximate	lbs.	2000	2200	2400	2600	2800	3400	3900	4400	4400	5000	5600
Asbestos to Cover, 1¼ in. thick	lbs.	200	225	250	275	300	325	350	375	400	425	450

\*Direct Steam Radiation: Make allowance for exposed piping and storage tank  
FOR SPECIFICATIONS SEE PAGE 18

*PACIFIC FIREBOX BOILERS ARE THE BEST DESIGNED AND MOST  
ECONOMICAL HEATING BOILERS MADE*





## PACIFIC FIREBOX STEAM BOILERS

Catalog Number		255	256	257	258	259	260	261	262	263	264	265
*Net Rating, Steam	sq. ft.	3500	3900	4500	5000	5800	6800	8200	10000	11500	13000	15000
Code Word		Stave	Star	Start	State	Stay	Steak	Steer	Step	Stew	Stick	Stile
List Price, Low Pressure with Firing Tools	\$	1874	2026	2234	2392	3084	3526	4060	4864	5246	5678	6100
List Price, Steam Trim'gs, complete \$ See page 15.		60	112	112	112	136	136	166	202	218	270	270
Shipping Weight, Approximate	lbs.	6300	6600	7200	7800	8600	10600	11800	12000	13500	18000	20000
Asbestos to Cover, 1¼ in. thick	lbs.	500	550	600	650	700	800	850	900	1000	1100	1200

\*Direct Steam Radiation: Make allowance for exposed piping and storage tank  
FOR SPECIFICATIONS SEE PAGE 19

***PACIFIC FIREBOX BOILERS ARE THE BEST DESIGNED AND MOST  
ECONOMICAL HEATING BOILERS MADE***



## PACIFIC FIREBOX STEAM BOILERS SPECIFICATIONS

Catalog Number		244	245	246	247	248	249	250	251	252	253	254
Diameter of Shell	ins.	28	28	28	28	28	33	33	33	37	37	40
Width of Boiler	ins.	36	36	36	36	36	41	41	41	45	45	48
Length of Boiler	ins.	48	54	60	66	72	54	66	78	80	92	96
Height of Boiler	ins.	67	67	67	67	67	73	73	73	77	77	80
Height of Water Line	ins.	58	58	58	58	58	62	62	62	65	65	68
Hgt. to Ctr. Smoke Conn.	ins.	58	58	58	58	58	62	62	62	65	65	68
Diam. Smoke Connection	ins.	12	12	12	12	12	14	14	14	16	16	18
Size Chimney Required	ins.	12x12	12x12	12x12	12x12	12x12	16x16	16x16	16x16	16x16	16x16	20x20
Minimum Height Chimney	ft.	40	40	40	40	40	40	40	40	45	45	50
Grate Area	sq. ft.	3.6	4.1	4.6	5.0	5.5	5.5	6.6	7.8	9.1	9.8	11.3
Heating Surface	sq. ft.	73.35	87.0	100.71	114.39	122.0	122.44	152.82	189.2	234.7	279.7	325.42
Size Steam Outlet	ins.	3	3	3	3	3	4	4	4	5	5	5
Size Return	ins.	2	2	2	2	2	2½	2½	2½	3	3	3
Size Safety Valve	ins.	1¼	1¼	1¼	1½	2	2	2	2	2½	2½	3
Diameter Tubes	ins.	3	3	3	3	3	3	3	3	3	3	3
Number of Tubes		22	22	22	22	22	32	32	32	42	42	52
Length of Upper Tubes	ins.	30	36	42	48	54	36	48	60	60	72	72
Length of Lower Tubes	ins.	18	24	30	36	42	24	36	48	48	60	60



## PACIFIC FIREBOX STEAM BOILERS SPECIFICATIONS

Catalog Number		255	256	257	258	259	260	261	262	263	264	265
Diameter of Shell	ins.	40	46	46	52	52	60	60	66	66	72	72
Width of Boiler	ins.	48	54	54	60	60	68	68	74	74	80	80
Length of Boiler	ins.	108	96	108	96	108	110	122	110	122	110	122
Height of Boiler	ins.	80	89	89	96	96	108	108	114	114	122	122
Height of Water Line	ins.	68	74	74	80	80	92	92	98	98	104	104
Hgt. to Center Smoke Conn.	ins.	68	74	74	80	80	91	91	97	97	103	103
Diam. Smoke Connection	ins.	18	18	18	20	20	26	26	30	30	32	32
Size Chimney Required	ins.	20x20	20x20	20x20	24x24	24x24	30x30	30x30	30x30	30x30	36x36	36x36
Minimum Height Chimney	ft.	50	50	50	50	50	60	60	70	70	70	70
Grate Area	sq. ft.	12.2	12.6	14.4	16.3	19.3	20.7	23	26.2	28.7	29.5	33
Heating Surface	sq. ft.	379.1	413.2	480.3	533	612	758	865	996	1137	1174.9	1343.3
Size Steam Outlet	ins.	5	6	6	6	6	7	7	8	8	8	8
Size Return	ins.	3	3	3	3	3	4	4	4	4	5	5
Size of Safety Valve	ins.	3½	3½	3½	3½	4	4	4½	2-3½	2-4	2-4½	2-4½
Diameter of Tubes	ins.	3	3	3	3	3	3½	3½	3½	3½	3½	3½
Number of Tubes		52	67	67	92	92	96	96	132	132	150	150
Length of Upper Tubes	ins.	84	72	84	72	84	84	96	84	96	84	96
Length of Lower Tubes	ins.	72	60	72	60	72	72	84	72	84	72	84





## PACIFIC DOWN-DRAFT SMOKELESS BOILERS

For Hot Water and Steam Heating

Patented

Pacific Double Return Firebox Steel Boilers, as shown on preceding pages, have proven their superior merit as heating boilers and marked a distinct advancement in boiler construction.

**WITH THE ADDITION OF THE SMOKELESS DOWN-DRAFT FEATURE THERE IS NO BOILER ON THE MARKET TODAY THAT COMBINES SO MANY PRACTICAL AND ESSENTIAL FEATURES TO SUCH A DEGREE OF PERFECTION AS FOUND IN THE PACIFIC DOWN-DRAFT SMOKELESS BOILER.**

The general principles of down-draft boilers are today generally understood, but some of the essential features of successful down-draft boiler construction are not. Perfect down-draft results are obtained only by having an absolute air tight setting, which is an impossibility with either sectional or brick set down-draft boilers.

Cast Iron Sectional Down-Draft Boilers are subject to a constant expansion and contraction, which loosens the cement between the sections of the boiler, permitting air leakage into the combustion chamber and very materially affecting the efficiency of such boilers.

The air leakage in brick set type boilers amounts to approximately 10 per cent when setting is new. This leakage rapidly increases with the continued use of the boiler and seriously affects its efficiency.

We ask you to note the illustration of the Pacific Down-Draft Boiler very carefully and critically. Observe how perfectly the absolutely necessary principles of down draft combustion have been carried out in this boiler.

### **AIR TIGHT FIREBOX.**

**DETACHABLE AND REMOVABLE WATER GRATE.** Can be replaced in a few hours by competent mechanic or detached and boiler operated as straight draft in case of emergency.

### **INSPECTION AND CLEAN-OUT PLUGS IN WATER GRATES.**

Something very essential in down-draft boilers.

### **WATER JACKETED FIRE ARCH AT REAR WATER GRATE INTEGRAL WITH FIREBOX.**

No Brick Work to Crumble and Replace—Last as Long as Boiler Itself.

### **SPECIAL HIGH TEMPERATURE FIRE ARCH AT THE REAR OF LOWER GRATE.**

**FACILITIES FOR EASILY CLEANING FLUES WHEN NECESSARY.**

**ALL FLUES CLEANED FROM FRONT.**

**SMOKE CONNECTION AT REAR BELOW TOP LINE OF BOILER.**

Compact and Symmetrical—Requires Small Floor Space—No Sections to Crack—No Brick Work to Repair.

Pacific Down-Draft Smokeless Boilers represent the maximum that can be obtained, in design, efficiency and economy of operation in heating boilers. None excel, none equal them.



Pacific Smokeless Down-Draft Boiler  
For Hot Water and Steam Heating  
PATENTED



## PACIFIC DOWN-DRAFT WATER BOILERS

Catalog Number		349	350	351	352	353	354	355	356
*Net Rating, Water	sq. ft.	2000	2800	3400	4200	4900	5800	6700	7400
Code Word		Dab	Dad	Daft	Dale	Dame	Dare	Dark	Dart
List Price, with Firing Tools	\$	1400	1560	1720	1780	1994	2124	2256	2524
Shipping Weight, Approximate	lbs.	3600	4100	4600	4650	5250	5900	6600	6900
Asbestos to Cover 1¼ ins. Thick	lbs.	325	350	375	400	425	450	500	550

\*Direct Hot Water Radiation: Make allowance for exposed piping and storage tank

FOR SPECIFICATIONS SEE PAGE 24

*PACIFIC DOWN-DRAFT FIREBOX BOILERS ARE THE BEST DESIGNED  
AND MOST ECONOMICAL SMOKELESS HEATING BOILERS MADE*





## PACIFIC DOWN-DRAFT WATER BOILERS

Catalog Number		357	358	359	360	361	362	363	364	365
*Net Rating, Water	sq. ft.	8500	9400	11000	13500	16500	19800	23100	25000	29000
Code Word		Dash	Date	Daub	Dawn	Day	Daze	Dazey	Deaf	Dean
List Price, with Firing Tools	\$	2724	3132	3768	4544	5048	5434	5994	6170	7054
Shipping Weight, Approximate	lbs.	7600	8200	9000	11100	12300	12600	14200	19000	21000
Asbestos to Cover 1¼ ins. Thick	lbs.	600	650	700	800	850	900	1000	1100	1200

\*Direct Hot Water Radiation: Make allowance for exposed piping and storage tank  
FOR SPECIFICATIONS SEE PAGE 25

*PACIFIC DOWN-DRAFT FIREBOX BOILERS ARE THE BEST DESIGNED  
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## PACIFIC DOWN-DRAFT WATER BOILERS SPECIFICATIONS

Catalog Number		349	350	351	352	353	354	355	356
Diameter of Shell	ins.	33	33	33	37	37	40	40	46
Width of Boiler	ins.	41	41	41	45	45	48	48	54
Length of Boiler	ins.	54	66	78	80	92	96	108	96
Height of Boiler	ins.	73	73	73	77	77	80	80	89
Height to Center Smoke Connection	ins.	62	62	62	65	65	68	68	74
Diameter of Smoke Connection	ins.	14	14	14	16	16	18	18	18
Size of Chimney Required	ins.	16x16	16x16	16x16	16x20	16x20	20x20	20x20	20x20
Minimum Height Chimney Required	ft.	45	45	45	50	50	55	55	55
Upper Grate Area	sq. ft.	5.5	6.6	7.8	9.1	9.8	11.3	12.2	12.6
Heating Surface	sq. ft.	133.3	171.7	210.2	259.1	305.3	354.8	410.0	447.8
Size of Outlets		2-4	2-4	2-4	2-4	2-4	2-5	2-5	2-5
Size of Returns		2-4	2-4	2-4	2-4	2-4	2-5	2-5	2-5
Diameter of Tubes	ins.	3	3	3	3	3	3	3	3
Number of Tubes		32	32	32	42	42	52	52	67
Length of Upper Tubes	ins.	36	48	60	60	72	72	84	72
Length of Lower Tubes	ins.	24	36	48	48	60	60	72	60



## PACIFIC DOWN-DRAFT WATER BOILERS

### SPECIFICATIONS

Catalog Number		357	358	359	360	361	362	363	364	365
Diameter of Shell	ins.	46	52	52	60	60	66	66	72	72
Width of Boiler	ins.	54	60	60	68	68	74	74	80	80
Length of Boiler	ins.	108	96	108	110	122	110	122	110	122
Height of Boiler	ins.	89	96	96	108	108	114	114	122	122
Height to Center Smoke Connec'n	ins.	74	80	80	91	91	97	97	103	103
Diameter of Smoke Connection	ins.	18	20	20	26	26	30	30	32	32
Size of Chimney Required	ins.	20x20	24x24	24x24	30x30	30x30	30x30	30x30	36x36	36x36
Minimum Height Chimney Required	ft.	55	60	60	65	65	70	70	75	75
Upper Grate Area	sq. ft.	14.4	16.3	19.3	20.7	23.0	26.2	28.7	29.5	33.0
Heating Surface	sq. ft.	518.2	578.3	662.7	817.3	928.4	1068.2	1213.7	1255.9	1430.7
Size of Outlets	ins.	2-6	2-6	2-6	2-7	2-7	2-8	2-8	2-8	2-8
Size of Returns	ins.	2-6	2-6	2-6	2-7	2-7	2-8	2-8	2-8	2-8
Diameter of Tubes	ins.	3	3	3	3½	3½	3½	3½	3½	3½
Number of Tubes		67	92	92	96	96	132	132	150	150
Length of Upper Tubes	ins.	84	72	84	84	96	84	96	84	96
Length of Lower Tubes	ins.	72	60	72	72	84	72	84	72	84





## PACIFIC DOWN-DRAFT STEAM BOILERS

Catalog Number		449	450	451	452	453	454	455	456
*Net Rating, Steam	sq. ft.	1300	1700	2100	2600	3100	3600	4100	4500
Code Word		Dock	Doe	Dodge	Doff	Dog	Doll	Dolt	Dome
List Price, Low Pressure with Firing Tools	\$	1400	1560	1720	1780	1994	2124	2256	2524
List Price of Steam Trimmings, Complete See page 15.	\$	50	50	52	52	60	60	112	112
Shipping Weight, Approximate	lbs.	3600	4100	4600	4650	5250	5900	6600	6900
Asbestos to Cover 1½ ins. Thick	lbs.	325	350	375	400	425	450	500	550

\*Direct Steam Radiation: Make allowance for exposed piping and storage tank

FOR SPECIFICATIONS SEE PAGE 28

*PACIFIC DOWN-DRAFT FIREBOX BOILERS ARE THE BEST DESIGNED  
AND MOST ECONOMICAL SMOKELESS HEATING BOILERS MADE*



## PACIFIC DOWN-DRAFT STEAM BOILERS

Catalog Number		457	458	459	460	461	462	463	464	465
Net Rating, Steam	sq. ft.	5200	5800	6600	8200	10000	12000	14000	15000	17500
Code Word		Don	Doom	Dot	Dote	Dough	Dove	Down	Dowse	Doze
List Price, Low Pres're with Firing Tools	\$	2724	3132	3768	4544	5048	5434	5994	6170	7054
List Price of Steam Trimmings, Complete	\$	112	136	136	166	202	218	218	270	304
See page 15.										
Shipping Weight, Approximate	lbs.	7600	8200	9000	11100	12300	12600	14200	19000	21000
Asbestos to Cover 1¼ ins. Thick	lbs.	600	650	700	800	850	900	1000	1100	1200

\*Direct Steam Radiation: Make allowance for exposed piping and storage tank

FOR SPECIFICATIONS SEE PAGE 29

***PACIFIC DOWN-DRAFT FIREBOX BOILERS ARE THE BEST DESIGNED  
AND MOST ECONOMICAL SMOKELESS HEATING BOILERS MADE***



## PACIFIC DOWN-DRAFT STEAM BOILERS SPECIFICATIONS

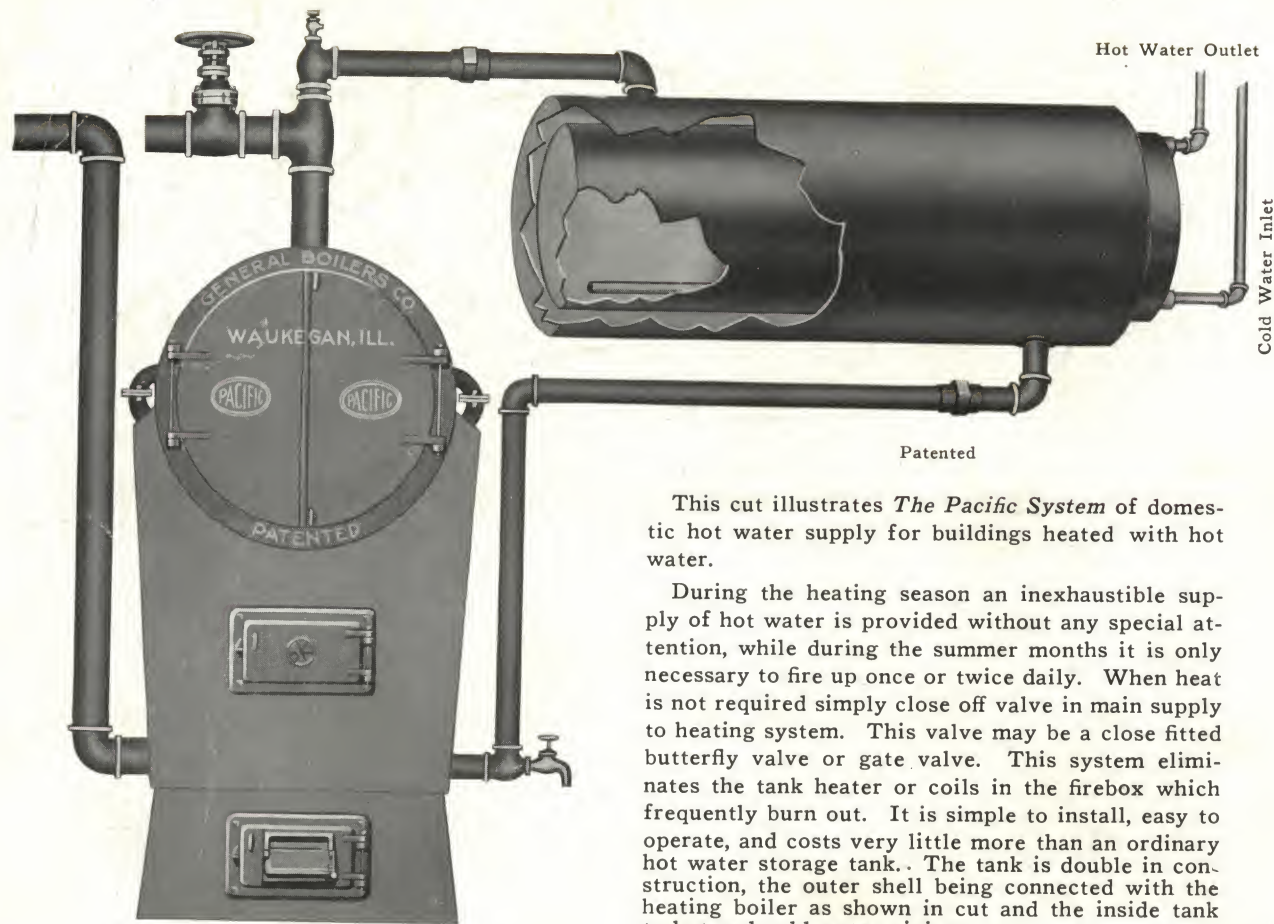
Catalog Number		449	450	451	452	453	454	455	456
Diameter of Shell	ins.	33	33	33	37	37	40	40	46
Width of Boiler	ins.	41	41	41	45	45	48	48	54
Length of Boiler	ins.	54	66	78	80	92	96	108	96
Height of Boiler	ins.	73	73	73	77	77	80	80	89
Height of Waterline	ins.	62	62	62	65	65	68	68	74
Height to Centre Smoke Connection	ins.	62	62	62	65	65	68	68	74
Diameter Smoke Connection	ins.	14	14	14	16	16	18	18	18
Size of Chimney Required	ins.	16x16	16x16	16x16	16x20	16x20	20x20	20x20	20x20
Minimum Height Chimney Required	ft.	45	45	45	50	50	55	55	55
Upper Grate Area	sq.ft.	5.5	6.6	7.8	9.1	9.8	11.3	12.2	12.6
Heating Surface	sq. ft.	133.3	171.7	210.2	259.1	305.3	354.8	410	447.8
Size Steam Outlet	ins.	4	4	4	5	5	5	5	6
Size Return	ins.	2½	2½	2½	3	3	3	3	3
Size Safety Valve	ins.	2	2	2½	2½	3	3	3½	3½
Diameter Tubes	ins.	3	3	3	3	3	3	3	3
Number Tubes		32	32	32	42	42	52	52	67
Length of Upper Tubes	ins.	36	48	60	60	72	72	84	72
Length of Lower Tubes	ins.	24	36	48	48	60	60	72	60





## PACIFIC DOWN-DRAFT STEAM BOILERS SPECIFICATIONS

Catalog Number		457	458	459	460	461	462	463	464	465
Diameter of Shell	ins.	46	52	52	60	60	66	66	72	72
Width of Boiler	ins.	54	60	60	68	68	74	74	80	80
Length of Boiler	ins.	108	96	108	110	122	110	122	110	122
Height of Boiler	ins.	89	96	96	108	108	114	114	122	122
Height of Waterline	ins.	74	80	80	92	92	98	98	104	104
Height to Centre Smoke Connec'n	ins.	74	80	80	91	91	97	97	103	103
Diameter Smoke Connection	ins.	18	20	20	26	26	30	30	32	32
Size of Chimney Required	ins.	20x20	24x24	24x24	30x30	30x30	30x30	30x30	36x36	36x36
Minimum Height Chimney Required	ft.	55	60	60	65	65	70	70	75	75
Upper Grate Area	sq. ft.	14.4	16.3	17.3	20.7	23	26.2	28.7	29.5	33
Heating Surface	sq. ft.	518.2	578.3	662.7	817.3	928.4	1068.2	1213.7	1255.9	1430.7
Size Steam Outlet	ins.	6	6	6	7	7	8	8	8	8
Size Return	ins.	3	3	3	4	4	4	4	5	5
Size Safety Valve	ins.	3½	4	4	4½	2-3½	2-4	2-4	2-4½	3-4
Diameter of Tubes	ins.	3	3	3	3½	3½	3½	3½	3½	3½
Number of Tubes		67	92	92	96	96	132	132	150	150
Length of Upper Tubes	ins.	84	72	84	84	96	84	96	84	96
Length of Lower Tubes	ins.	72	60	72	72	84	72	84	72	84



This cut illustrates *The Pacific System* of domestic hot water supply for buildings heated with hot water.

During the heating season an inexhaustible supply of hot water is provided without any special attention, while during the summer months it is only necessary to fire up once or twice daily. When heat is not required simply close off valve in main supply to heating system. This valve may be a close fitted butterfly valve or gate valve. This system eliminates the tank heater or coils in the firebox which frequently burn out. It is simple to install, easy to operate, and costs very little more than an ordinary hot water storage tank. The tank is double in construction, the outer shell being connected with the heating boiler as shown in cut and the inside tank to hot and cold water piping.



## PACIFIC CIRCULATING TANKS



PATENTED

These tanks are specially constructed for hot water heating systems, see page 30, but are very convenient to use in place of cooling coils on district heating systems where the condensation has to be cooled to 100 degrees Fahrenheit before entering sewer. By using this tank, all heat energy otherwise wasted can be utilized to heat water for the building, thereby effecting a great saving. Where a large and rapid supply of water is required, such as barber shops, hotel kitchens, and restaurants, this tank will prove very efficient. If the tank is properly installed it cannot become water logged, as the steam space is large and even and will heat the water in the inner tank very rapidly. For size and capacities, see page 32.





## PACIFIC CIRCULATING TANKS

Number	Capacity Gallons	Size	TAPPINGS			Weight	List Price
			Hot Water Ins.	Cold Water Ins.	Supply & Return Ins.		
1	50	20x60	$\frac{3}{4}$	$\frac{3}{4}$	2	600	\$240.00
2	65	23x60	$\frac{3}{4}$	$\frac{3}{4}$	2	690	276.00
3	80	23x72	$\frac{3}{4}$	$\frac{3}{4}$	2	800	320.00
4	95	23x84	1	1	2 $\frac{1}{2}$	925	370.00
5	110	23x96	1	1	2 $\frac{1}{2}$	1050	420.00
6	125	23x108	1	1	2 $\frac{1}{2}$	1150	460.00
7	145	30x72	1 $\frac{1}{4}$	1 $\frac{1}{4}$	2 $\frac{1}{2}$	1200	480.00
8	170	30x84	1 $\frac{1}{4}$	1 $\frac{1}{4}$	2 $\frac{1}{2}$	1350	540.00
9	195	30x96	1 $\frac{1}{2}$	1 $\frac{1}{2}$	3	1550	620.00
10	220	30x108	1 $\frac{1}{2}$	1 $\frac{1}{2}$	3	1700	680.00
11	245	30x120	1 $\frac{1}{2}$	1 $\frac{1}{2}$	3	1820	728.00
12	255	36x84	2	2	3	1870	748.00
13	295	36x96	2	2	3	2050	820.00
14	335	36x108	2	2	3	2250	900.00
15	375	36x120	2	2	3	2350	940.00



